# Virology

QR 360 V5

VOLUME 63

1975

#### EDITORS

George K. Hirst, EDITOR-IN-CHIEF Purnell W. Choppin Robert Haselkorn
W. K. Joklik T. A. Shalla L. Siminovitch
Peter K. Vogt Milton Zaitlin

#### ASSOCIATE EDITORS

J. G. Atabekov J. B. Bancroft J. Michael Bishop George E. Bruening John S. Colter Richard W. Compans Samuel Dales Etienne de Harven G. A. de Zoeten T. O. Diener Peter Duesberg R. I. B. Francki Fred R. Frankel E. Peter Geiduschek Max Gottesman Allan Granoff

E. M. J. Jaspars
J. M. Kaper
Albert S. Kaplan
Eduard Kellenberger
Jonathan King
David W. Kingsbury
Arnold J. Levine
Leon Levintow
Richard M. Lister
Jacob V. Maizel, Jr.
Lloyd J. Old
Bruce A. Phillips
Theodore Pincus
Thomas P. Pirone
Charles C. Randall

I. R. Schneider Maxime Schwartz June Rothman Scott Jean Semal Aaron J. Shatkin Albert Siegel Ethan R. Signer F. William Studier Robert H. Symons Irwin Tessman J. H. Tremaine Harold E. Varmus Jon Weil Robert Whitcomb Norton D. Zinder Hans J. Zweerink

ACADEMIC PRESS

New York and London



A Subsidiary of Harcourt Brace Jovanovich, Publishers

## Copyright © 1975 by Academic Press, Inc. ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form, or by any means electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

### Contents of Volume 63

Number 1, January 1975

	JOSEPH R. NEVINS AND WOLFGANG K. JOKLIK. Poly(A) Sequences of Vaccinia Virus	
and an extension	in Vitro and in Vivo	
-	L. G. TYULKINA, G. N. NAZAROVA, A. S. KAFTANOVA, R. K. LEDNEVA, A. A. BOGDANOV, AND J. G. ATABEKOV. Reassembly of TMV 20 S. Protein Diele	1
-	with 5-5 KNA fragments	15
and contract the second	A. I. Bukhari and B. Allet. Plaque-forming λ-Mu Hybrids  Maria Carla Loni and Maurice Green. Virus-Specific DNA Sequences in Mouse and Rat Cells Transformed by the Harvey and Moloney Murine Sarcoma	. 30
-	viruses Detected by the Still Hypridization	40
No. of Concession, Name of Street, or other Persons, Name of Street, or ot	Werner Schäfer, Gerhard Hunsmann, Volker Moennig, Fernando de Noronha, Dani P. Bolognesi, Robert W. Green, and Gudrun Hüper. Polypeptides of Mammalian Oncornaviruses. II. Characterization of a Murine Leukemia	
l	VIIIUS POLVDEDLIGE (D. 15) Bearing Interspecies Reactivity	48
Commence of the last	DANI P. BOLOGNESI, AND GUDRUN HUPER Polypeptides of Mammalian On	
-	cornaviruses. III. Localization of p15 and Reactivity with Natural Antibody MITSUAKI YOSHIDA, MASATOSHI OWADA, AND KUMAO TOYOSHIMA. Strain Specificity	60
ı	of Changes in Adenylate Cyclase Activity in Cells Transformed by Avian Sarcoma Viruses	
1	C. J. WEENING AND J. F. BOL. Viral RNA Replication in Extracts of Alfalfa Mossic	68
ı	Virus-Infected Vicia Faba	77
Ì	ROGER N. BEACHY AND MILTON ZAITLIN. Replication of Tobacco Mosaic Virus. VI. Replicative Intermediate and TMV-RNA-related RNAs Associated with Poly-	
The second	ribosomes	84
	U. L. Schulman and P. Palese. Susceptibility of Different Strains of Influenza A Virus to the Inhibitory Effects of 2-Deoxy-2,3-dehydro-N-trifluoroacetylneuraminic Acid (FANA)	98
- Constitution	DISAKO MATSUO-KATO AND HISAO FUJISAWA. Studies on Bacteriophage T3 III Char-	90
ľ	acterization of Capsids as Intermediates of the T3 Head Assembly ARTHUR W. Сніко. Evidence of Multiple Virion Components in Leaf Dip Prep-	105
ı	arations of Barley Stripe Mosaic Virus	115
ĺ	A. HAGILADI, D. P. BOURQUE, AND S. G. WILDMAN. Rates of Rod Accumulation and Viral RNA Synthesis During Early and Late Stages of Tobacco Mosaic Virus	
	Infection in Young, Expanding Tobacco Leaves	123
ŀ	D. P. Bourque and J. G. Bourque. A Kinetic Model of TMV-RNA Replication Based on Rates of Virus Accumulation in Vivo	130
	D. P. Bourque, A. Hagiladi, and S. G. Wildman. Experimental Test of a TMV	100
	Replication Model. Attempts to Identify Molecular Precursors of TMV-RNA and Determine the Time Required to Synthesize a TMV-RNA Molecule	135
Į	Marlene Belfort, Dina Noff, and Amos B. Oppenheim. Isolation. Characteriza-	
1	tion and Deletion Mapping of Amber Mutations in the cII Gene of Phage λ J. S. Semancik, T. J. Morris, L. G. Weathers, B. F. Rodorf, and D. R. Kearns.	147
	Physical Properties of a Minimal Infectious RNA (Viroid) Associated with the	
,	Exocortis Disease  J. M. Vlak, TH. H. Rozijn, and J. S. Sussenbach. Studies on the Mechanism of	160
	Replication of Adenovirus DNA IV. Discontinuous DNA Chain Propagation	168

G N William La Vinneag II Coll				
PHILIP I. MARCUS AND MARGARET J. SEKELLICK. Cell Killing by Viruses. II. Cell Killing by Vesicular Stomatitis Virus: a Requirement for Virion-derived Transpiration.	176			
C. Scholtissek, R. Rott, and HD. Klenk. Two Different Mechanisms of the	191			
DAVID S. HODES, THOMAS J. SCHNITZER, ANTHONY T. RABIOLI, Parinfluenza 3 and ROBERT M. CHANÇEK. Inhibition of Respiratory Syncytial, Parinfluenza 3 and	201			
YECHIEL BECKER AND YAEL ASHER. In Vitro Synthesis of Divin Induced In Induced In Induced In Induced In Induced In Induced Indu	209			
Peter W. Kühl and Isao Katsura. Morphogenesis of the Tail of Bacteriophage λ. I. In Vitro Intratail Complementation Isao Katsura and Peter W. Kühl. Morphogenesis of the Tail of Bacteriophage	221			
λ. II. In Vitro Formation and Properties of Phage Latticles with Livia Bong	238			
Mark W. Schwinghamer and Robert H. Symons. Fractionation of Cucumber Mosaic Virus RNA and Its Translation in a Wheat Embryo Cell-free System George Khoury, Malcolm A. Martin, Theresa N. H. Lee, and Daniel Nathans.	252			
A Transcriptional Map of the SV40 Genome in Transformed Cell Lines	263			
SHORT COMMUNICATIONS				
<ul> <li>GARY N. GUSSIN AND KWANG-MU YEN. Repressor Synthesis in Vivo After Infection of E. coli by a p<sub>rm</sub> Mutant of Bacteriophage λ</li></ul>	273			
ence to Newcastle Disease Virus	278			
W. F. Rochow and Irmgard Muller. Use of Aphids Injected with Virus-Specific Antiserum for Study of Plant Viruses that Circulate in Vectors.  D. V. R. Reddy, Guido Boccardo, R. Outridge, D. S. Teakle, and L. M. Black. Electrophoretic Separation of dsRNA Genome Segments from	282			
Fiji Disease and Maize Rough Dwarf Viruses	287			
Appropria	20.4			
ADDENDUM ANNOUNCEMENTS	294 292			
Number 2, February 1975				
J. G. McDonald and Ernest Hiebert. Characterization of the Capsid and Cylin-				
drical Inclusion Proteins of Three Strains of Turnip Mosaic Virus  J. P. Briand, J. P. Bouley, G. Jonard, J. Witz, and L. Hirth. Low pH RNA- Protein Interactions in Turnip Yellow Mosaic Virus. II. Binding of Synthetic	295			
J. P. Bouley, J. P. Briand, G. Jonard, J. Witz, and L. Hirth. Low pH RNA-Protein Interactions in Turnip Yellow Mosaic Virus, III. Reassociation Experi	304			
G. Nigel Godson. Evolution of $\phi X174$ II A Classical Mondified TYMV-RNA	312			
<ul> <li>Genome and Comparison with the Cleavage Map of the G4 Phage</li> <li>K. M. Makkouk and D. J. Gumpf. Characterization of the Protein and Nucleic</li> </ul>	320			
HARSHAD R. THACORE AND JULIUS S. YOUNGNER Persistence of Vicional Standard Company	336			
tis Virus in Interferon-Treated Cell Cultures  Jon Weil, Norman deWein, and Anthony Casale. Morphogenesis of λ with Genomes Containing Excess DNA: Functional Particles Containing 12 and 15%	345			
	352			
B-tropic Murine Leukemia Virus on Fv-1 <sup>b</sup> Cell Lines: Requirement for Multriple Cycles of Cell Replication for Transformation and Virus A.	002			
sion by RadLV Sion by RadLV	367			

	D. KORANT, K. LONBERG-HOLM, F. H. YIN, AND J. NOBLE-HARVEY. Fractionation of Biologically Active and Inactive Populations of Human Rhinovirus Type	
EF	BHARD KOCH AND HERMANN OPPERMANN Songitingsting of H. I. G. H. C. Y.	384
	TH H. POSTEL AND ARNOLD J. LEVINE Studies on the Devil	395
	pyrimidine Kinases in Normal, SV40-Transformed and SV40- and Adenovirus-Infected Mouse Cells in Culture  O. DIENER AND D. R. SMITH. Potesto Spindle Tyler Virginia VIII.	404
	O. DIENER AND D. R. SMITH. Potato Spindle Tuber Viroid. XIII. Inhibition of Replication by Actinomycin D.	421
	ing Infection of Escherichia coli with Bacteriophage $\lambda$ .  The Formation of Polylysogens during Infection of Escherichia coli with Bacteriophage $\lambda$ .  The Formation of Polylysogens during Infection of Polylysogens during Infection of Escherichia coli with Bacteriophage $\lambda$ .	428
	Electron Microscopy 424, $\lambda$ , and 21, Determined by Denaturation and	438
	copy of Cells Infected with Murine Oncornaviruses	447
	Mosaic Virus by Tobacco Protoplasts	459
1	VARD A. HAVELL, JAN VILČEK, ERNESTO FALCOFF AND BRIAN BERMAN, SUPPRES	466
	NALD COURT, LINDA GREEN, AND HARRISON Echous, Positive and Negative	475
	ITH A. LESNAW AND M. E. REICHMANN. RNA Synthesis by Temperature Son	484
	A PERLIN AND BRUCE A. PHILLIPS. In Vitro Assembly of Polioviruses. IV. Evidence for the Existence of Two Assembly Steps in the Formation of Empty.	492
	HUEBNER, D. SANTOLL C. M. CROCE AND H. KOPROWSKI. Characterization	505
R	of Defective SV40 Isolated from SV40-Transformed Cells  RIE J. CARTER AND GEORGE KHOURY. Specific Cleavage of Adenovirus-Associated Virus DNA by Restriction Endonuclease R. EcoRI—Characterization	512
	of Cleavage Products CY V. HAMLETT AND HILLARD BERGER. Mutations Altering Genetic Recom-	523
	bination and Repair of DNA in Bacteriophage T4	539
OI	RT COMMUNICATIONS	
	P. M. PITHA, J. PITHA, AND W. P. Rowe. Lack of Requirement of Reverse Transcriptase Function for the Activation of Murine Leukemia Virus by	
	Halogenated Pyrimidines  Anne-Marie Aubertin. Arginine Requirement for Frog Virus 3 Develop-	568
	ment  Maureen McDonnell, Concepcion Ronda-Lain, and Alexander Tomasz.	573
	"Diplophage": A Bacteriophage of Diplococcus pneumoniae  Anthony J. Faras. The Methionyl Transfer RNAs of Rous Sarcoma Virus	577 583
	L. Pinck, M. Genevaux, J. P. Bouley, and M. Pinck. Amino Acid Acceptor Activity of Replicative Form from Some Tymovirus RNA's	589
	Janet E. Mertz, Ethan R. Signer, and Fred Schaefer. Amber Red- Mutants of Phage Lambda	591
TF	HOR INDEX	596

• Subject Index for this volume (Volume 63) will appear in the December issue as part cumulative index for the year 1975.

